

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: STREETWORKS

Report Number: P348677

Luminaire Tested: **ARCH-N-PA1-40-827-U-T4W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P348677  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-18)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: ARCH-N-PA1-40-827-U-T4W  
Description: ARCHEON ROADWAY AND AREA LUMINAIRE  
(1) 80 CRI, 2700K, 740mA LIGHT ENGINE WITH 16 LEDS AND  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4072 lumens  
Efficiency: N/A  
Efficacy: 99.3 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.75' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B1 - U0 - G1

Input Watts (W): 41  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT

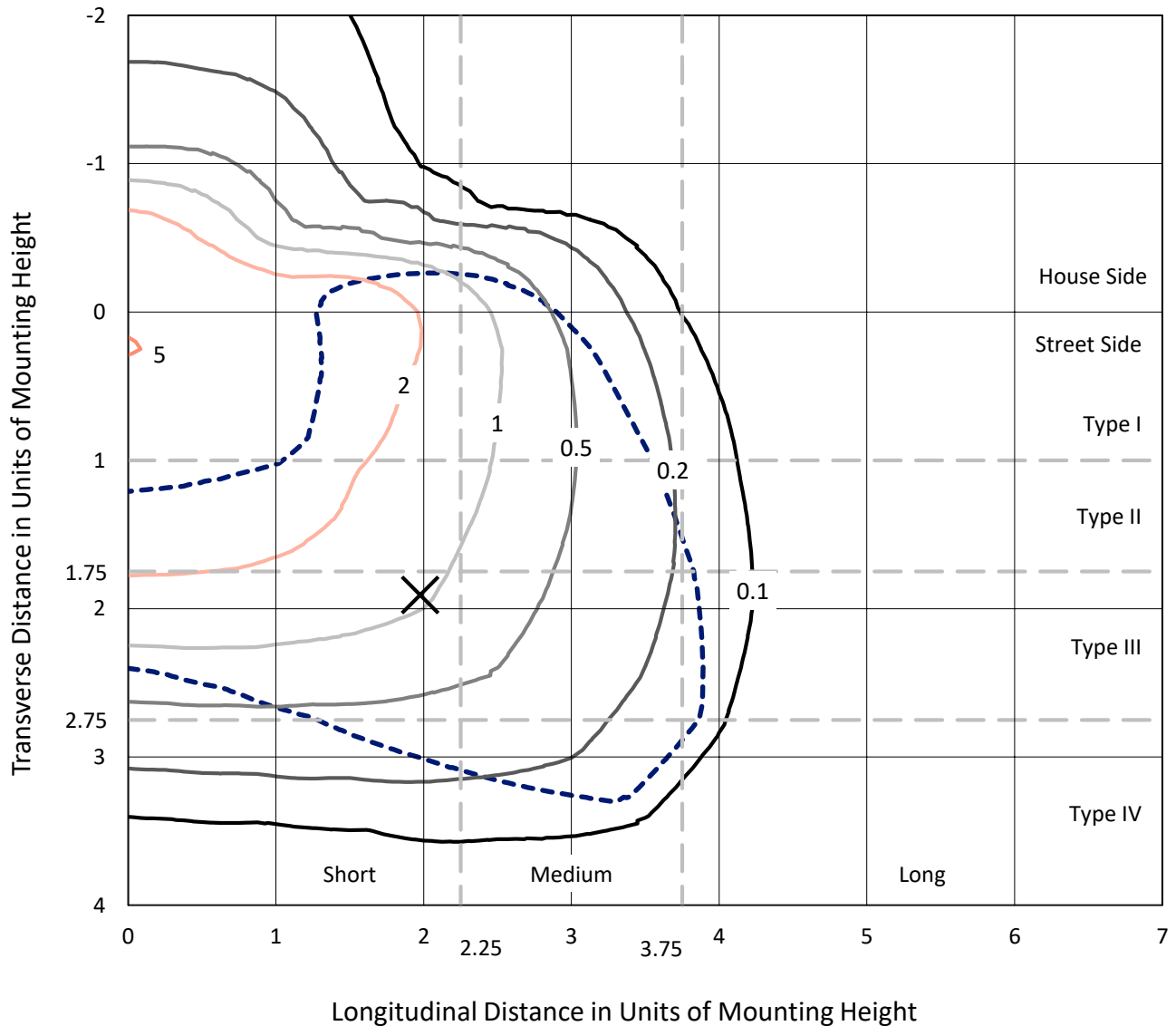


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### Iso-Footcandle Lines of Horizontal Illumination

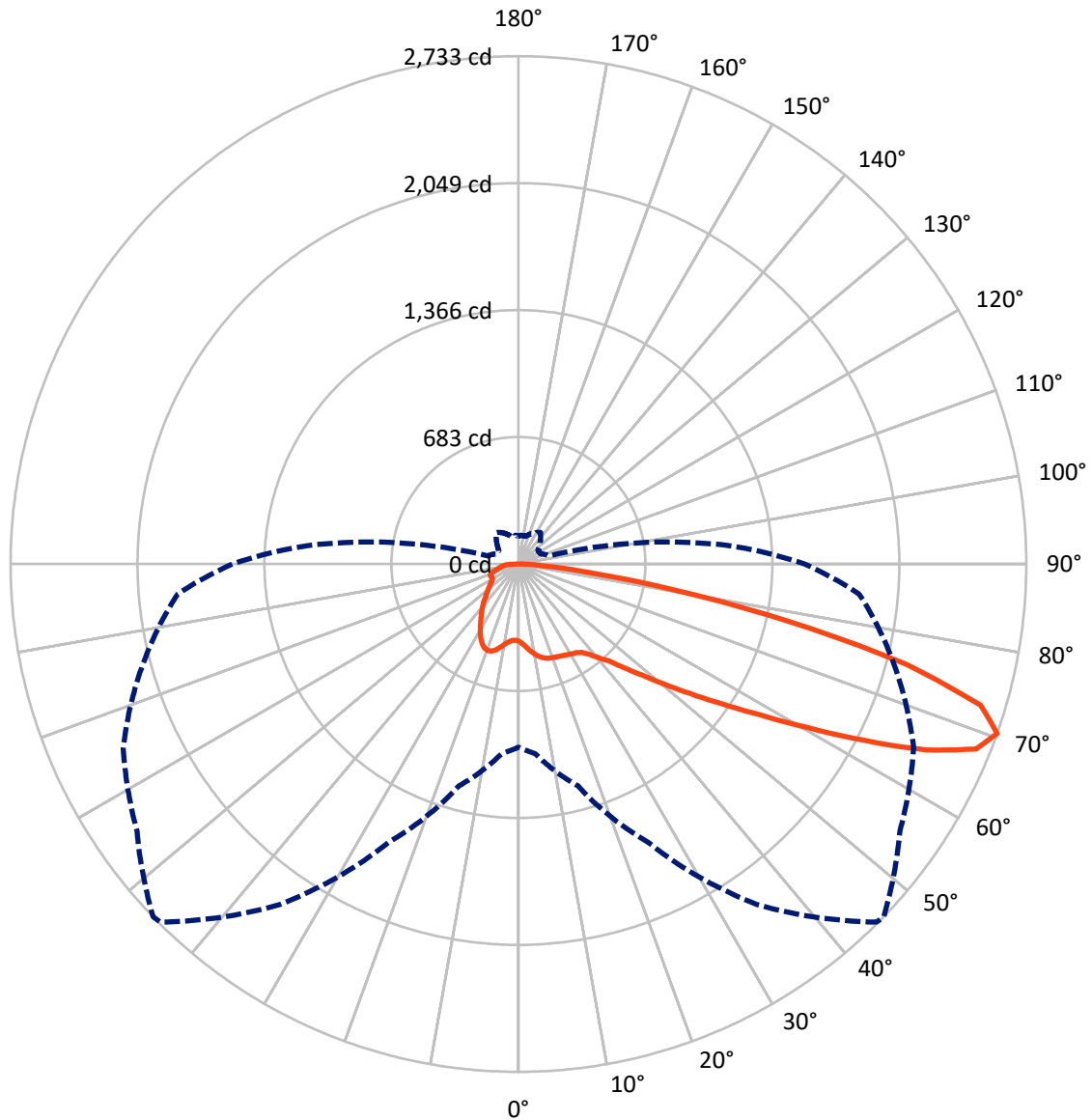
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.2 fc  
 Type IV - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 46-Deg Lateral    - - - Horizontal Cone Through 70-Deg Vertical



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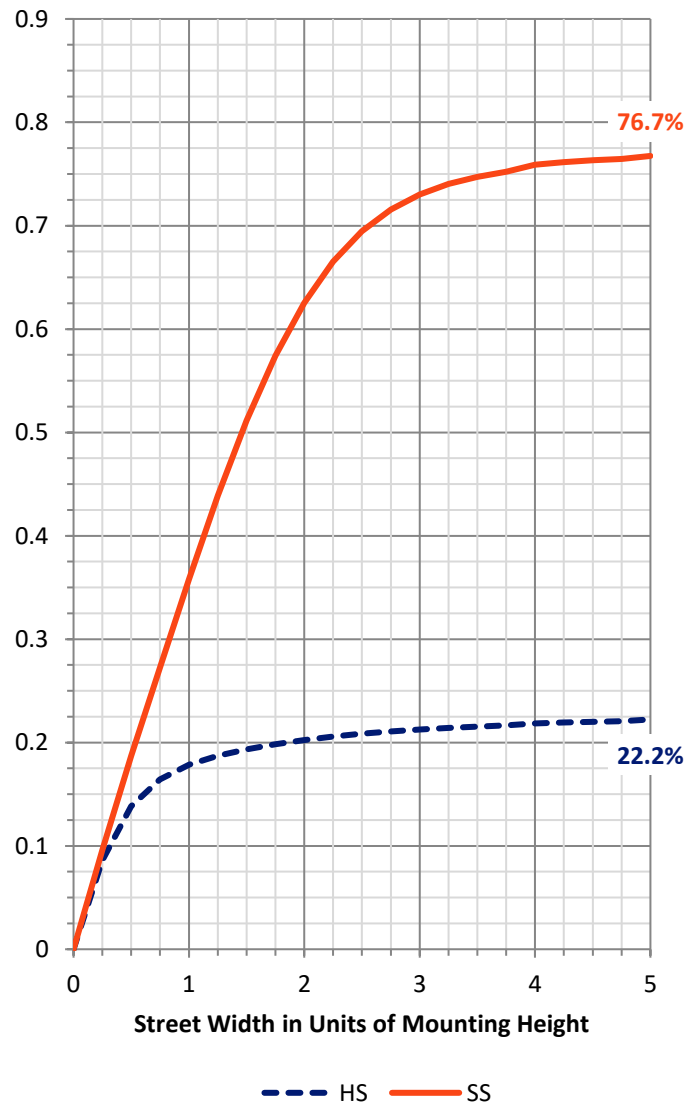
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 933.3    | 0.0    | 933.3  |
|                    | % Fixture | 22.9     | 0.0    | 22.9   |
| <b>Street Side</b> | Lumens    | 3138.7   | 0.0    | 3138.7 |
|                    | % Fixture | 77.1     | 0.0    | 77.1   |
| <b>Total</b>       | Lumens    | 4072.0   | 0.0    | 4072.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 42.3   | 1.0       |
| 10°-20°   | 140.9  | 3.5       |
| 20°-30°   | 234.9  | 5.8       |
| 30°-40°   | 333.4  | 8.2       |
| 40°-50°   | 490.4  | 12.0      |
| 50°-60°   | 830.5  | 20.4      |
| 60°-70°   | 1178.9 | 29.0      |
| 70°-80°   | 716.2  | 17.6      |
| 80°-90°   | 104.5  | 2.6       |
| 90°-100°  | 0.0    | 0.0       |
| 100°-110° | 0.0    | 0.0       |
| 110°-120° | 0.0    | 0.0       |
| 120°-130° | 0.0    | 0.0       |
| 130°-140° | 0.0    | 0.0       |
| 140°-150° | 0.0    | 0.0       |
| 150°-160° | 0.0    | 0.0       |
| 160°-170° | 0.0    | 0.0       |
| 170°-180° | 0.0    | 0.0       |
| 0°-90°    | 4072.0 | 100.0     |
| 0°-180°   | 4072.0 | 100.0     |

**Coefficient of Utilization**



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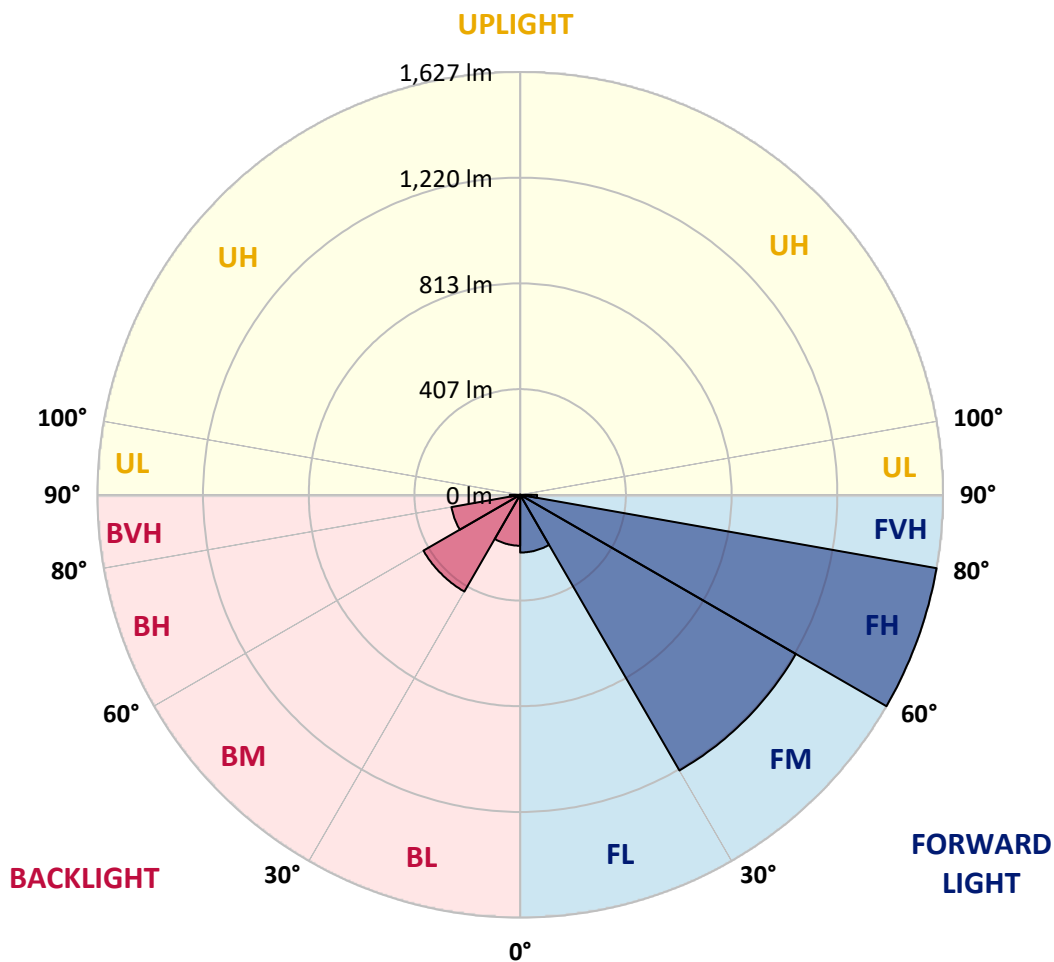
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 222.2  | 5.5       |                         |      |         |
| FM   | (30°-60°)   | 1224.7 | 30.1      |                         |      |         |
| FH   | (60°-80°)   | 1626.7 | 39.9      |                         |      | G1/1800 |
| FVH  | (80°-90°)   | 65.1   | 1.6       |                         |      | G1/100  |
| BL   | (0°-30°)    | 195.9  | 4.8       | B1/500                  |      |         |
| BM   | (30°-60°)   | 429.6  | 10.6      | B1/1000                 |      |         |
| BH   | (60°-80°)   | 268.3  | 6.6       | B1/500                  |      | G1/500  |
| BVH  | (80°-90°)   | 39.4   | 1.0       |                         |      | G1/100  |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B1-U0-G1**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 46°    | 55°    | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 414.9  | 414.9  | 414.9  | 414.9  | 414.9  | 414.9  | 414.9  | 414.9  | 414.9  | 414.9  | 414.9  |
| 2.5°  | 435.6  | 435.9  | 436.5  | 435.1  | 431.2  | 430.0  | 429.6  | 425.6  | 422.9  | 419.0  | 415.7  |
| 5°    | 470.5  | 470.7  | 469.9  | 466.0  | 457.4  | 450.9  | 450.4  | 441.2  | 432.8  | 423.9  | 417.2  |
| 7.5°  | 506.8  | 507.2  | 504.6  | 497.2  | 485.1  | 473.9  | 473.2  | 460.7  | 448.0  | 434.5  | 424.5  |
| 10°   | 539.0  | 537.3  | 533.0  | 522.7  | 508.4  | 494.7  | 494.1  | 481.1  | 466.4  | 450.1  | 436.7  |
| 12.5° | 560.5  | 559.1  | 553.5  | 541.0  | 525.2  | 512.7  | 511.6  | 499.4  | 485.2  | 467.4  | 451.4  |
| 15°   | 572.3  | 573.3  | 565.8  | 551.6  | 536.2  | 525.6  | 524.7  | 516.0  | 503.3  | 485.4  | 467.0  |
| 17.5° | 573.9  | 574.7  | 567.4  | 553.4  | 540.8  | 533.6  | 533.2  | 527.5  | 518.3  | 501.0  | 481.7  |
| 20°   | 564.9  | 565.5  | 559.5  | 547.9  | 539.7  | 537.5  | 537.3  | 534.8  | 528.0  | 512.7  | 494.0  |
| 22.5° | 552.0  | 552.4  | 548.1  | 539.7  | 536.9  | 540.4  | 541.4  | 540.4  | 535.5  | 521.2  | 503.6  |
| 25°   | 548.8  | 548.5  | 544.0  | 535.5  | 537.9  | 545.3  | 546.5  | 547.0  | 543.6  | 531.1  | 515.9  |
| 27.5° | 564.2  | 563.3  | 554.8  | 541.1  | 542.6  | 551.6  | 553.2  | 557.3  | 555.2  | 544.2  | 529.8  |
| 30°   | 609.0  | 607.3  | 589.9  | 562.3  | 554.8  | 559.4  | 561.5  | 567.9  | 568.3  | 559.1  | 548.4  |
| 32.5° | 684.5  | 682.4  | 651.2  | 601.9  | 575.3  | 567.3  | 569.3  | 578.9  | 584.0  | 576.9  | 565.4  |
| 35°   | 780.0  | 777.6  | 736.6  | 669.2  | 609.5  | 582.5  | 583.9  | 591.6  | 601.9  | 591.8  | 576.5  |
| 37.5° | 879.5  | 873.8  | 834.3  | 748.3  | 664.0  | 615.0  | 615.0  | 615.9  | 620.8  | 599.9  | 589.6  |
| 40°   | 978.4  | 972.7  | 937.0  | 841.4  | 734.5  | 666.1  | 662.9  | 641.3  | 637.4  | 619.4  | 615.9  |
| 42.5° | 1070.4 | 1068.7 | 1047.7 | 946.6  | 817.3  | 716.4  | 712.0  | 675.3  | 676.1  | 665.0  | 665.1  |
| 45°   | 1168.2 | 1168.2 | 1151.1 | 1052.8 | 913.7  | 797.2  | 792.8  | 738.9  | 747.2  | 742.1  | 754.5  |
| 47.5° | 1248.1 | 1250.6 | 1248.2 | 1163.5 | 1025.9 | 899.9  | 891.9  | 826.9  | 850.3  | 868.0  | 904.1  |
| 50°   | 1329.6 | 1333.5 | 1333.9 | 1284.8 | 1161.5 | 1022.0 | 1012.8 | 943.8  | 996.1  | 1046.8 | 1117.8 |
| 52.5° | 1447.9 | 1456.7 | 1421.7 | 1405.9 | 1327.6 | 1167.0 | 1157.9 | 1094.2 | 1181.4 | 1252.7 | 1374.9 |
| 55°   | 1557.6 | 1549.9 | 1525.0 | 1534.7 | 1505.4 | 1331.9 | 1325.1 | 1269.2 | 1388.0 | 1480.5 | 1639.2 |
| 57.5° | 1616.9 | 1616.4 | 1641.5 | 1683.3 | 1697.2 | 1535.4 | 1529.7 | 1475.3 | 1620.8 | 1690.4 | 1887.4 |
| 60°   | 1686.6 | 1687.6 | 1749.7 | 1844.6 | 1902.0 | 1788.7 | 1786.2 | 1745.0 | 1847.0 | 1886.3 | 2082.1 |
| 62.5° | 1696.4 | 1713.9 | 1820.9 | 1984.3 | 2093.8 | 2084.7 | 2090.3 | 1987.9 | 2049.3 | 2042.7 | 2227.4 |
| 65°   | 1584.2 | 1607.3 | 1801.0 | 2026.5 | 2284.4 | 2408.5 | 2413.6 | 2232.2 | 2208.9 | 2176.3 | 2279.4 |
| 67.5° | 1354.2 | 1388.5 | 1598.9 | 1934.7 | 2347.3 | 2647.7 | 2655.0 | 2421.6 | 2341.3 | 2221.6 | 2154.3 |
| 70°   | 985.5  | 1023.6 | 1235.4 | 1652.3 | 2235.2 | 2724.2 | 2732.5 | 2505.3 | 2346.3 | 2092.7 | 1839.1 |
| 72.5° | 595.3  | 625.1  | 799.8  | 1216.4 | 1886.6 | 2584.9 | 2599.5 | 2399.1 | 2142.2 | 1772.6 | 1358.0 |
| 75°   | 261.4  | 280.9  | 386.7  | 701.0  | 1350.6 | 2138.7 | 2156.9 | 2053.5 | 1740.5 | 1288.2 | 802.7  |
| 77.5° | 111.3  | 116.9  | 158.6  | 304.5  | 763.5  | 1461.4 | 1486.5 | 1500.4 | 1180.9 | 701.0  | 339.2  |
| 80°   | 69.4   | 71.6   | 89.7   | 137.8  | 357.3  | 820.8  | 847.8  | 882.8  | 586.4  | 257.7  | 118.5  |
| 82.5° | 42.2   | 44.7   | 59.6   | 83.3   | 186.0  | 372.1  | 385.0  | 409.7  | 227.6  | 111.3  | 61.3   |
| 85°   | 25.4   | 27.2   | 36.5   | 52.7   | 105.9  | 146.3  | 146.2  | 161.7  | 107.2  | 71.6   | 32.3   |
| 87.5° | 12.1   | 13.5   | 19.5   | 27.3   | 53.4   | 54.9   | 51.4   | 58.3   | 65.1   | 47.0   | 16.3   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |



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**CANDELA DISTRIBUTION (continued):**

|       | 90°    | 95°    | 105°  | 115°  | 125°  | 135°  | 145°  | 155°  | 165°  | 175°  | 180°  |
|-------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 414.9  | 414.9  | 414.9 | 414.9 | 414.9 | 414.9 | 414.9 | 414.9 | 414.9 | 414.9 | 414.9 |
| 2.5°  | 414.6  | 414.0  | 412.2 | 410.8 | 410.5 | 409.7 | 409.0 | 409.4 | 410.0 | 410.1 | 410.1 |
| 5°    | 414.4  | 412.9  | 410.5 | 409.6 | 410.8 | 412.5 | 414.6 | 417.4 | 419.0 | 420.3 | 421.1 |
| 7.5°  | 421.1  | 418.2  | 415.6 | 415.0 | 417.5 | 422.0 | 426.7 | 432.6 | 436.6 | 439.4 | 439.9 |
| 10°   | 432.3  | 428.7  | 426.0 | 426.6 | 431.0 | 437.4 | 444.1 | 451.6 | 457.8 | 461.5 | 461.8 |
| 12.5° | 445.1  | 441.6  | 439.1 | 441.5 | 448.9 | 456.7 | 463.6 | 470.2 | 475.8 | 479.5 | 479.5 |
| 15°   | 459.9  | 457.4  | 454.4 | 459.9 | 469.9 | 476.9 | 479.8 | 483.0 | 486.1 | 488.9 | 488.3 |
| 17.5° | 474.1  | 471.7  | 470.2 | 476.6 | 487.0 | 490.2 | 488.3 | 485.9 | 485.9 | 487.5 | 487.7 |
| 20°   | 486.3  | 484.3  | 485.2 | 491.5 | 496.9 | 493.6 | 486.3 | 478.8 | 475.8 | 476.6 | 477.4 |
| 22.5° | 497.1  | 496.1  | 499.0 | 502.0 | 498.1 | 486.3 | 473.0 | 462.8 | 459.0 | 458.8 | 459.0 |
| 25°   | 509.6  | 509.5  | 513.1 | 507.8 | 490.5 | 468.9 | 450.9 | 441.1 | 439.0 | 440.6 | 443.4 |
| 27.5° | 525.2  | 526.8  | 528.6 | 509.2 | 475.2 | 442.6 | 424.3 | 417.5 | 419.6 | 423.6 | 426.3 |
| 30°   | 545.2  | 549.3  | 545.4 | 505.7 | 453.2 | 412.5 | 395.1 | 393.1 | 398.8 | 404.5 | 407.3 |
| 32.5° | 564.5  | 571.1  | 561.6 | 496.7 | 424.8 | 380.6 | 367.1 | 366.5 | 373.5 | 379.0 | 382.9 |
| 35°   | 580.1  | 593.1  | 573.7 | 478.7 | 391.9 | 351.2 | 341.3 | 337.5 | 340.0 | 346.6 | 351.0 |
| 37.5° | 600.5  | 622.1  | 582.1 | 451.2 | 356.2 | 326.9 | 315.4 | 306.7 | 304.5 | 307.1 | 309.4 |
| 40°   | 637.7  | 666.3  | 586.0 | 412.9 | 321.4 | 302.7 | 291.0 | 278.3 | 269.5 | 263.1 | 263.2 |
| 42.5° | 698.4  | 723.8  | 583.5 | 366.4 | 289.2 | 279.0 | 265.7 | 251.1 | 236.9 | 222.4 | 221.3 |
| 45°   | 797.1  | 809.4  | 576.0 | 317.0 | 260.9 | 254.2 | 241.8 | 227.1 | 208.2 | 191.8 | 190.2 |
| 47.5° | 955.0  | 927.8  | 564.2 | 274.0 | 235.9 | 233.1 | 221.7 | 204.9 | 184.8 | 171.5 | 170.4 |
| 50°   | 1170.3 | 1098.8 | 558.5 | 239.7 | 213.9 | 214.7 | 205.4 | 187.6 | 168.6 | 158.9 | 157.7 |
| 52.5° | 1427.8 | 1297.9 | 569.5 | 213.2 | 196.2 | 199.1 | 192.2 | 175.4 | 159.6 | 151.9 | 150.8 |
| 55°   | 1695.0 | 1504.2 | 581.4 | 194.0 | 179.5 | 185.2 | 182.8 | 169.0 | 154.7 | 147.6 | 146.6 |
| 57.5° | 1923.6 | 1658.2 | 557.7 | 178.4 | 164.6 | 173.5 | 175.6 | 165.0 | 152.2 | 145.8 | 144.6 |
| 60°   | 2067.6 | 1720.2 | 495.5 | 163.7 | 152.7 | 164.2 | 171.4 | 163.9 | 153.2 | 152.6 | 151.8 |
| 62.5° | 2135.9 | 1714.8 | 402.3 | 152.2 | 145.3 | 160.1 | 174.5 | 170.2 | 164.3 | 169.3 | 169.7 |
| 65°   | 2105.2 | 1632.8 | 299.6 | 144.5 | 140.1 | 161.7 | 183.7 | 182.0 | 167.5 | 172.5 | 173.2 |
| 67.5° | 1903.4 | 1437.3 | 221.9 | 137.8 | 134.2 | 166.0 | 200.4 | 185.9 | 161.2 | 164.9 | 162.6 |
| 70°   | 1538.5 | 1139.5 | 171.1 | 130.3 | 128.2 | 165.4 | 207.9 | 183.5 | 154.4 | 155.2 | 149.2 |
| 72.5° | 1060.9 | 777.0  | 139.2 | 123.3 | 119.6 | 150.8 | 202.6 | 177.7 | 148.7 | 142.3 | 134.3 |
| 75°   | 576.9  | 417.1  | 118.3 | 116.1 | 104.4 | 132.4 | 192.9 | 173.5 | 143.5 | 135.0 | 130.6 |
| 77.5° | 227.0  | 173.1  | 102.7 | 106.2 | 91.3  | 116.9 | 182.0 | 165.6 | 136.4 | 125.3 | 123.0 |
| 80°   | 92.7   | 88.4   | 85.1  | 91.8  | 78.5  | 102.3 | 168.9 | 156.2 | 127.9 | 116.2 | 111.8 |
| 82.5° | 52.5   | 54.9   | 66.2  | 72.5  | 63.7  | 94.2  | 162.6 | 148.7 | 117.8 | 104.1 | 98.8  |
| 85°   | 26.9   | 32.2   | 46.1  | 52.0  | 46.8  | 80.1  | 149.8 | 130.2 | 94.5  | 79.7  | 80.1  |
| 87.5° | 13.0   | 18.0   | 29.1  | 32.6  | 30.4  | 58.0  | 111.9 | 94.3  | 73.6  | 58.3  | 56.4  |
| 90°   | 0.0    | 0.0    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)